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ABSTRACT

A summary of the discussions held at the National Institute of Education (NIE) conference on information dissemination and utilization is presented. Four major questions relating to NIE information dissemination activities are raised, followed by a description of some major features of the incentive structure of information utilization. Five program areas whose scope and thrust could be affected by the incentive structure are discussed and 11 possible research questions are brought to the surface. Three approaches to these research questions are considered, and nine examples of experimental projects are reviewed. (PB)

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DRAFT WEILER PANEL REPORT

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NIE/NCEC EDUCATIONAL INFORMATION DISSEMINATION SERVICES AND PRACTITIONER INCENTIVES TO UTILIZE INFORMATION AND R&D PRODUCTS

A CONFERENCE REPORT

On June 6, 1972, a conference was held at the offices of the National Institute of Education Planning Unit on the subject of NIE/NCEC educational information dissemination services and practitioner incentives to utilize information and R&D products. The conference was attended by Daniel Weiler (Chairman, on leave from Rand Corporation), Harry Silberman, Marc Tucker, Ben Sprunger, Emerson Elliott, and Bev Kooi (NIE Planning Unit), David Cohen (Harvard Graduate School of Education), Tom Glennan (OEO), Dale Mann (Columbia Teachers College), Dick Schutz (SWRL), and Tom Clemens (NCEC). This report summarizes the conference highlights and conclusions.

With NCEC coming into NIE, there will be new opportunities to imbed information dissemination activities within complementary and supporting NIE programs. The questions before us were, briefly:

1. What should these NIE-supported activities look like (programs, demonstrations, research)?
2. How should NCEC activities be structured so as to mesh efficiently with the overall NIE agenda in this area?
3. What research programs, (including experiments and demonstrations), should be considered an integral part of NIE/NCEC's information dissemination activities? Alternatively,
4. What programs should be supported elsewhere within NIE because they have a less direct bearing on the information dissemination/utilization question?

We assumed that any discussion of these problems would keep in mind the existence of both multiple objectives and multiple audiences for educational information and R&D products. For example, there are important differences between the objectives of maintenance, improvement and reform in education, and audiences would include at least the following sets:

District Audiences

Teachers
Teacher specialists
District level specialists

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District Audiences, (cont'd.)

Principals
District administrators
Board members

State Level Audiences

State and county specialists
State superintendents
State Board Members
State Legislators

Federal Level Audiences

Federal program designers
Federal executives
Federal legislators

One has only to glance at a list like this to appreciate the complexity of the problem of incentive structures in education. However, some fundamentals seem well enough established to merit consideration as a basis for further thinking about this problem:

1. Incentives to seek and use educational information and R&D products cannot be said to exist independent of incentives and opportunities to make and implement policy decisions with regard to educational programs--in the classroom, in the school, in the district, in the state, in the nation. These may be incentives and opportunities to maintain an educational program at its existing level of quality, to implement new and improved programs, or to reform programs or processes. What matters is that these incentives and opportunities precede incentives to acquire and use educational information, determine the extent of the information required, the kind of information sought, the speed with which it is desired, the format considered most appropriate, the style of its acquisition, and the uses to which it will be put.
2. These incentives and opportunities can be a consequence of "extrinsic" forces impinging on educational professionals from legislators, courts, or the community--i.e., from "outside the system"--or they can be "intrinsic" to the educational system within the bounds of its present structural, bureaucratic, professional, and political limitations.
3. These incentives and opportunities are related directly to perceptions held by different actors of: (a) opportunities for professional advancement (status, esteem, income, personal satisfaction), (b) the risks that may

accompany a decision to act or to withhold action, and (c) opportunities to pursue deeply held beliefs.

What we are saying, then, is that the need for and uses made of educational information and R&D products are related to the capacity to act in education, and that the nature of this capacity--the incentive structure, the opportunities, the origins of policy decisions--is something we must know much more about if information dissemination is to have a more direct bearing on the process of educational change. Broadly stated, present OE/NCEC policy with regard to the dissemination of educational information is based on the assumption that by providing practitioners with the necessary information, many barriers to educational improvement can be overcome. We take the view that if practitioners are in fact to seek, acquire, and use whatever information is available, we must worry about their incentives to do so, and that these incentives are not related in the first instance to the desire for information per se, but to more fundamental questions of incentives to implement educational policy decisions.

Thus, depending on what can be learned about some of these processes, one might somewhat different decisions about--

1. The substance of NIE/NCEC programs designed to address the incentive problem.
2. The targets for NIE/NCEC information dissemination efforts.
3. The products deemed most useful for different audiences, and most likely to promote the objectives of educational improvement and reform.

Research on these problems is logically a part of the NIE/NCEC information dissemination program in the same sense that market research is a part of all product dissemination efforts.

The Conference discussed some examples of NIE/NCEC programs either currently under way or now projected whose scope and thrust could well be affected by conclusions emerging from research in some of these areas. For example--

1. What should be the charters of the educational extension agents? Who should they service? What kinds of services should they provide? What should be their qualifications? What screening procedures for their selection should be instituted? What kind of training program should they be in?
2. How legitimate are current assumptions about the information needs of the educational community? These needs are for the most part identified by

practitioners themselves on the basis of (a) their current access to information, (b) the current quality of that information, (c) their current place in the educational organizational structure, and (d) their current level of incentives to make decisions leading to improvement or reform. Of what utility are information dissemination practices based on this kind of information?

3. What is the validity and utility of the research now being conducted under NCEC auspices on the "best of current practice"? This kind of research is extremely difficult. At the least, such efforts should include an attempt to provide descriptive syntheses of the systemic effects of different combinations of resource inputs (including student characteristics), teaching processes, and organizational structures. Information thus acquired would then have to be inspected for our ability to extrapolate "general rules" for program success under various circumstances, and such rules would in turn have to be translated into practical implementation advice. Even then, the settings for program application will be largely sui generis, and will probably require the kind of expert assistance that could not be rendered by the current model of an extension agent. Difficult and unanswered questions remain: What are the proper criteria for assessing program effectiveness? Can various combinations of program characteristics be "weighted" according to some index that will give potential replicators a reasonable indication of the probabilities of success with such a program in their own district or school? (How should such a index be constructed? On what basis should the weights be apportioned?) If such program descriptions are to be collected successfully nationwide (assuming for the moment that answers can be found to some of the preceding questions), a requirement is suggested for a broad and highly institutionalized information collection effort based on some decision about relevant performance criteria, program characteristics of interest, and related matters. The machinery for such an information collection effort is not available and has not been designed. Thus, NCEC must fall back on the current practice of checking by phone, followed by site visits, simply to ascertain whether locally generated program descriptions are reliable indicators of what is actually happening. The resulting product cannot resemble practical guidance for program replication, and it is little wonder that program replication does not result. If NIE/NCEC is to move in strength into this area, and if the necessary information on program characteristics is to be collected, serious attention

must be devoted to the mechanism by which this information is to be aggregated, analyzed, synthesized, and translated into a product of some utility. This, in turn, suggests much more careful attention than has heretofore been paid to the entire information collection as well as information dissemination structure of the NCEC effort. (Somehow, extension agents do not seem to be the answer.)

4. What mechanism will be built into this process to insure that with eventual funding by state and local agencies of programs begun at the federal level, the necessary quality of personnel and programs will be maintained?
5. How shall NCEC programs--especially ERIC--be structured in order to avoid serious coordination and interface problems between basic information identification, collection and dissemination functions, the extension agents, information retrieval centers, and other components of the national system?

A number of more specific research topics are suggested by these and related concerns. Without attempting to provide a formal "research agenda" and without too much effort to eliminate redundancy, we list some of these topics below:

1. What are the boundaries and limitations on opportunities to implement educational change within the structure of the present educational system? Have incentives and opportunities that exist within these boundaries been thoroughly explored? What incentives are latent within this system and how can they be tapped? The current NCEC model assumes that there are extensive opportunities and incentives already in existence, and that by manipulating the access to and volume of information, NCEC can have an impact on educational change. There may indeed be such incentives and opportunities, and this model may therefore make some sense, but the ultimate consequences of these assumptions have not been fully tested, and NCEC may do itself a disservice by failing to explore more thoroughly the character of motivations and opportunities that now exist in the system.
2. What is the relationship between individual and organizational capacities to act, and their information acquisition styles? Specifically, how do organizations institute search procedures? Under what circumstances do they attempt to rationally maximize outcomes, and when do they simply attempt to minimize uncertainty? Where they behave in the latter mode, how can we get them to refocus on educational problems per se? The question

suggests a need for basic research on organizational performance--what we can expect of them, and of different strategies for promoting incentives. We should look at the circumstances under which education professionals will combine under outside pressure in order to institute a self-regulatory mechanism. What is the "tipping point" for this kind of behavior, i.e., how much real change can we get before the system becomes hyper-defensive? Some related points: (a) Men, not organizations, act, but what does this mean in practice? (b) Organizations will trade some uncertainties for others. Which? Under what circumstances? (c) If organizations try to minimize uncertainty, will the deliberate creation of certain kinds of uncertainty drive them to uncertainty-minimization activities that are productive?

3. Given a requirement for the creation of incentives which originate with forces that are "extrinsic" to the current system, what kinds of public information activities would stimulate the interest of parents and community in (a) increasing the level of their interaction with schools, (b) seeking and acquiring information that will assist them in making useful evaluations of educational practice, and (c) organizing for productive criticism and participation in decision-making processes?
4. What kind of person and what kind of educational product is most effective for the information transfer function for different audiences and different educational objectives?
5. What has been the outcome of various strategies used by different institutions for the installation of effective practice? What lessons can be learned from their experience?
6. What have been the consequences--including consequences relating to information acquisition sytles--of past adoption of various changes and reforms?
7. What has been the impact of various strategies for the implementation of demonstration and experimental educational programs, as well as the implementation of new but non-experimental programs, on activities designed to maximize program replication? How have "proven" programs been packaged and distributed?
8. What is the nature of the economic and social marketplace in which publishers operate? What is the role of commercial publishers in providing practical curriculum and materials alternatives to school systems, including their role in distribution practices? Can incentives for use be attached directly

to R&D products? What alternative curriculum and product development strategies might be considered in order to "open up" the system?

9. What is the role played in the implementation of educational change by each of the actors who sit organizationally between the teacher and the top governance of a school district, including the role of the principal? Is there any difference in the consequences that can be expected from attempts to adopt new programs, depending on the identity of the district person responsible for program adoption?
10. What factors promote or inhibit the spread of information and good programs within the district? What is the role of the planning function? What system insulation mechanisms have districts tried (e.g., "specialists" hired in response to federal and local pressures to innovate)? Who is most responsible for the implementation of change in different kinds or different sizes of districts?
11. What is the influence of the school purchasing and supply system on educational change, including the state curriculum adoption system? What can we find out about the impact of purchasing, packaging, materials recycling, and related mechanical problems on incentives to make change decisions, i.e., how can negative incentives to change be eliminated at this level?

Three approaches suggest themselves for this kind of research:

1. Case studies of important new programs or demonstrations.
2. Tracer studies of some past experiences.
3. Experimental variations.

Some specific examples:

1. A tracer study of the effects of various course content improvement strategies undertaken by the National Science Foundation.
2. A study of Project Follow Through program replication and dissemination activities.
3. Case studies of information acquisition styles and program dissemination replication activities associated with the different styles of educational change represented by the various Experimental Schools projects funded by USOE.
4. A study of the information acquisition and utilization procedures in the elementary education voucher demonstration.
5. A study of the personnel requirements associated with the information transfer function in non-education areas. For example, the technical scientific writer in engineering/aerospace.

6. Experiments with varieties of extension agent roles and qualifications, e.g., (a) Parent/community extension agents--who would service the needs of parent/community groups rather than the needs of educators, (b) The program replication agent--the specialist who understands the political/social/bureaucratic entry points in the system, and the probabilities of success that can be attached to different implementation modalities, (c) The board member extension agent--someone who can deal directly with elected members of Boards of Education in the LEAs in order to provide them with special analytic assistance.

7. An experimental television program aimed at teachers, whose purpose it would be to inform teachers of programs, curricula, and products of potential interest, and to inform them about the fastest way in which to acquire information about these products and programs. Such a program might be coordinated with both extension agents and some form of physical linkage at the school building level, perhaps something as simple as a direct telephone line. This kind of experiment would be designed in part to test the extent of the incentives and opportunities that now exist within the boundaries of the present educational system.

8. An experimental television program aimed at parents, whose purpose it would be to help them make informed judgments about the quality of their children's education and to point them toward ways of getting further information that might be of assistance to them.

9. An experimental project to create an elite cadre of school principals, selected and trained on the model of the Armed Forces Command and Staff College, or of the Harvard Graduate School of Business Administration's Advanced Management School. (Some experiments in this area have already been undertaken, apparently with disappointing results. One of the problems appears to have been the reinforcement of a form of elitism that served to further insulate administrators from the views of parents. We assume that any training program with such an outcome was on its face the wrong kind.) This kind of experiment would also be designed to test the boundaries of opportunity that exist within the present system, by attempting to reinforce incentives to seek change (and information that will be of assistance in planning change) from within an existing cadre of school administrators.

Some of these research efforts should be an integral part of the government's information dissemination program (e.g., from the above examples, numbers 5, 6, 7, and 8 in particular). Some might more profitably be supported under related funding auspices,

h they may be expected to yield important information impacting on information dissemination activities. On balance, we believe that an important fraction of the budget devoted to information dissemination in education should be used for research on the general question of incentives for change, which will in turn have a direct impact on the question of incentives to seek, acquire, and utilize educational information and R&D products. Thus, while the main thrust of NCEC's information dissemination efforts need not necessarily be alter d at present, it would seem unwise to undertake a large extension agent program as presently contemplated before we are able to answer some of these critical questions. In addition, the work that is presently being undertaken in the areas of educational information needs assessment, and the identification of exemplary programs needs to be thoroughly reevaluated, and research programs designed specifically to improve these functions should be undertaken as soon as possible.